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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/540,189	11/23/2005	Jiawen Tu	CN020025	8266

24737 7590 10/15/2009

PHILIPS INTELLECTUAL PROPERTY & STANDARDS
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EXAMINER	
WALTHALL, ALLISON N	

ART UNIT	PAPER NUMBER
2629	

MAIL DATE	DELIVERY MODE
10/15/2009	PAPER

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BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application Number: 10/540,189
Filing Date: November 23, 2005
Appellant(s): TU ET AL.

Thomas Onka
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 7/7/2009 appealing from the Office action mailed 12/10/2008.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

5181181	Glynn	1-1993
6347290	Bartlett	2-2002

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless -
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 15-16, 19, 22-23, and 26 are rejected under 35 U.S.C. 102(b) as being anticipated by Glynn, US Patent 5,181,181.

As to **claims 15, 19, 22, and 26**, Glynn discloses in FIGS. 3 and 4 an input device (device 1), comprising:

a motion detection sensor (Accelerometers, col. 6 lines 3-12) that is configured to generate three-dimensional motion data (acceleration signals, col. 6 lines 20-22) on first, second and third axes, (x, y, and z axes, respectively) associated with 3D movement of the input device;

means for transmitting (Transceiver 7-12, col. 6 lines 40-43) the motion data to a computer;

means for causing (Computer Interface Control 36, col. 7 lines 21-33) the computer derive a distance and direction of the movement of the input device in a two-dimensional plane based on the motion data on the first and second axes;

means for causing (Processing element 34, col. 7 lines 44-50) the computer to determine whether the motion data on the third axis is greater than a first predetermined

value (Motion signals will be process when it is beyond a threshold level); and means for causing (Transceiver 22, col. 6 lines 40-43 and col. 7 lines 21-33) the computer to move a cursor to a corresponding position based on the distance and direction derived in the 2D plane (FIG. 7, Process 3.3, col. 10 lines 43-50), upon the computer determining the motion data on the third axis is greater than the first predetermined value.

As to **claims 16 and 23**, Glynn discloses wherein the transmitting means wirelessly (wireless 21, FIG. 3 and col. 6 line 35) transmits the motion data.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 17-18, 20-21, 24-25, and 27-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Glynn in view of Bartlett, US Patent 6,347,290.

As to **claim 17, 20, 24, and 27**, Glynn discloses the device of claim 15, also further comprising:

means for causing the computer to determine whether the motion data (motion signals) on the first and second axes are greater than second and third pre-determined values, respectively (col. 7 lines 44-50, the processing element 34 reduces errors by establishing thresholds of the motion signals, i.e. x, y, and z motions);

Glynn does not specifically discloses means for causing the computer to perform a left click operation, upon the computer determining either the motion data on the first axis are greater than the second predetermined value or the motion data on the second axis are greater than the third predetermined value.

However, Bartlett teaches a device for causing the computer to perform a left click operation (select operation, col. 5 lines 57-61), upon the computer determining either the motion data on the first axis are greater than the second predetermined value or the motion data on the second axis are greater than the third predetermined value (Gesture command are perform after passing a certain threshold, for example shown in FIG. 2a, col. 5 lines 16-23).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention was made to have integrated gesture commands to perform different command operations, such as left click operation, as taught by Bartlett into the Processing Element 34 of Glynn for the purpose of providing avoidance of confusion between position commands and gesture commands and eliminating the need for a pause while awaiting completion of an input of a command (col. 2 lines 15-22).

As to **claims 18, 21, 25, and 28**, Barlett further discloses the device comprising: means for causing the computer to determine whether a time interval is greater than a predetermined duration (Shown in FIGS. 2a-d, each gesture command is expressed over an interval of time, starting time ts and ending time tf. Different command, i.e. left, right, drag operations, etc..., can be associated with different gesture and time interval as shown in four different examples in FIGS. 2a-d, col. 3 lines 56-60), the time interval

being between the motion data on the third axis being greater than the first predetermined minimum value and the motion data on the first axis being greater than the second predetermined value or the motion data on the second axis being greater than the third predetermined value (Gesture commands are analyzed when the orientations of any of the three axes are past a certain threshold to prevent analyzing error movements);

means for performing a drag operation upon the computer determining the time interval is greater than the predetermined duration (See FIG. 2c, the gesture command is different than compared to FIG. 2a as the time interval is greater); and

means for performing a right click operation upon the computer determining the time interval is not greater than the predetermined duration (See FIG. 2d, the gesture command is different than compared to FIG. 2a as the magnitude is different, and compared to FIG. 2c as the time interval is lesser).

Although Barlett does not explicitly teach performing a drag operation and right click operation, Barlett teaches the use of different gesture movements can employ different commands to obtain different responses of the computing device (col. 4 lines 8-12).

Therefore it would have been obvious to one of ordinary skill in the art at the time of invention was made to have made a design choice and implement known command features of an three dimensional input devices such as double click, right click, scroll operations, etc.., corresponding to each different gesture movements of Barlett for the purpose of increasing the versatility functions on a three dimensional input device.

(10) Response to Argument

(A) Appellant argues that Glynn patent fails to anticipate claims 15, 16, 19, 22, 23, and 26 under 35 USC 102(b)

Appellant argues on page 3, last paragraph-page 4, second paragraph of the Arguments filed 7/7/2009, that the input device of the present application is distinguished from Glynn in that the present application does not intend to move a 3-dimensional cursor or interact with a computer representation in 3-dimensional space while the input device of Glynn does. However, this additional feature of Glynn does not preclude it from meeting the claimed limitations. For example, if a cursor is controlled in 3-dimensions, it is inherently controlled in 2-dimensions. Additionally, Glynn discloses in column 11, lines 52-68 that the motion of the mouse along three dimensions may be interpreted by the computer to mean other than movement within three-dimensional space, for example, for developing a two-dimensional color graphic image, movement in the z axis could indicate selection of colors.

Appellant argues on page 4, third paragraph-page 5, first paragraph, that the "threshold" of Glynn (column 7, lines 44-50) clearly is intended to be a "combination of signals in various dimensions, as the types of errors noted above are not intended to be limited to a threshold comparison of motion data of one axis alone." The examiner respectfully disagrees. For example, Glynn discusses in column 9, lines 61-67 that if the Z axis were oriented perpendicular to the surface of the earth, the Z axis accelerometer would detect a force equal to the full force of gravity, even in the absence of a force applied by the operator. Thus the device compensates for gravitational effects, which in

this case would move the cursor if the signal from the single z axis translational acceleration sensor was greater than the force of gravity. In addition, since much of the processing of the signals of the sensors is done separately for each axis, (for example, see column 6, lines 60-63 and column 7, lines 2-7, and column 7, lines 53-56) it would be obvious to provide a threshold for each signal. Glynn does not disclose combining signals in various dimensions to compare to a threshold, and it is reasonably interpreted that "a threshold level for motion signals" would mean a threshold level for each of the motion signals.

Appellant argues on page 4, second paragraph-page 6, last paragraph that Glynn does not teach that a detected z-dimension motion acts as a trigger that results in cursor movement, and that Glynn instead teaches cursor movement will occur when no motion is detected in the z-dimension. Although Glynn may teach cursor movement for example, when no z-dimension motion is detected, but an x or y dimension motion is detected, Glynn still reads on the claimed limitations. The claims do NOT require that if a third axis motion is NOT detected, the cursor movement will NOT occur. The claims only require that if a third axis motion is greater than a predetermined value, the cursor will move to the corresponding position. Although in the present application, this position is based ONLY on the distance and directions derived in the 2D plane of the first and second axes, this is NOT required by the claims. Glynn's cursor position is based on the distance and directions derived in the first and second axes, meeting the claimed limitations, and additionally in the third axis. The distance and direction derived in the third dimension is an additional feature of Glynn which the claims do not preclude. If a

third axis threshold of Glynn is exceeded (and additionally a first and second axis threshold), the cursor will move according to the movement in the first, second, and third axes. If a third axis threshold is exceeded but there is no movement in the first and second axes, the cursor of Glynn will move in the third axis direction, however this is again an additional feature of Glynn, not precluded by the claims. In this case the cursor is still moved to a "corresponding position based on the distance and direction derived in the 2D plane" also, since no cursor movement along the first and second axes corresponds to a distance and direction derived in the 2D first axis-second axis plane of zero.

Therefore the examiner maintains that the features which the Appellant points out to distinguish the present application over Glynn are not present in the claims. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

(B) Appellant argues that the combination of Glynn and Bartlett fails to render Claims 17, 18, 20, 21, 24, 25, 27, and 28 as being obvious under 35 USC 103(a)

Appellant argues that the cited features of the invention are not taught by the Glynn reference and that Bartlett also fails to remedy this deficiency. However, as argued above regarding the rejection under 35 USC 102(b), the examiner maintains the cited features are taught by the Glynn reference.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/Allison Walthall/

Examiner, Art Unit 2629

October 8, 2009

Conferees:

/Richard Hjerpe/

Supervisory Patent Examiner, Art Unit 2629

/Chanh Nguyen/

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